

Application No.: 09/729,248**Docket No.: 2336-057****AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A channel module apparatus for a cable set-top box, comprising:

a switching block for ~~distributing a signal received via a cable to two or more stages and mixing one of the distributed signals with a radio frequency modulated signal~~ having a first signal distributor and a second signal distributor, wherein

the first signal distributor is arranged to distribute a signal received via a radio frequency input connector as a first signal for outputting to a cable modem tuner and as a second signal, and is arranged to transfer a signal transmitted from the cable modem tuner to the radio frequency input connector, and

the second signal distributor is arranged to distribute the second signal as a third signal for outputting to a television and as a fourth signal;

a tuner block for tuning to ~~an output signal from said switching block~~ the fourth signal distributed by the second signal distributor;

a channel demodulation block for demodulating an output signal from said tuner block into audio and video signals; and

a radio frequency modulation block for modulating the audio and video signals from said channel demodulation block into a television signal.

2. (original) The channel module apparatus as set forth in claim 1, wherein said switching block, radio frequency modulation block, tuner block and channel demodulation block

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are contained in a single chassis in the form of one package.

3. (currently amended) The channel module apparatus as set forth in claim 1, wherein said switching block further includes:

~~a radio frequency input connector provided for connection to said cable;~~

~~a first signal distributor for distributing a signal received via said radio frequency input connector to two stages and transferring a signal transmitted from a cable modem tuner to said radio frequency input connector;~~

~~a first cable connector for transmitting one signal distributed by said first signal distributor to said cable modem tuner and an output signal from said cable modem tuner to said first signal distributor, respectively;~~

~~a high pass filter for blocking the signal transmitted from the cable modem tuner and passing high-frequency components of the second signal to the second signal distributor low-frequency components of the other signal distributed by said first signal distributor and passing high-frequency components thereof;~~

~~a second signal distributor for distributing an output signal from said high pass filter to two stages;~~

~~a tuner connection terminal for transferring one signal distributed by said second signal distributor to said tuner block;~~

~~a mixer for mixing the other signal distributed by said second signal distributor with an output signal from said radio frequency modulation block; and~~

~~a radio frequency output connector for transmitting an output signal from said mixer to a television.~~

4. (currently amended) The channel module apparatus as set forth in claim 3, wherein said switching block further includes:

a first amplifier enabled in response to a booster voltage for amplifying [[the]] an output

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signal from said high pass filter and transferring the amplified signal to said second signal distributor; and

a second amplifier enabled in response to said booster voltage for amplifying the ~~[[other]]~~ third signal distributed by said second signal distributor ~~and transferring the amplified signal to said mixer.~~

5. (canceled)

6. (currently amended) A channel module apparatus for a cable set-top box, comprising:

a radio frequency modulation block for modulating audio and video signals into a television signal; and

~~a switching block for distributing a signal received via a radio frequency input connector to a first cable connector and a tuner connection terminal, mixing the received signal with an radio frequency modulated signal and outputting the resulting signal via a radio frequency output connector~~ having a first signal distributor, a second signal distributor, and a mixer;

wherein

the first signal distributor is arranged to distribute a signal received via a radio frequency input connector as a first signal for outputting to a cable modem tuner and as a second signal, and is arranged to transfer a signal transmitted from the cable modem tuner to the radio frequency input connector;

the second signal distributor is arranged to distribute the second signal as a third signal for outputting to a television and as a fourth signal; and

the mixer is arranged to mix the third signal from the second signal distributor and a radio frequency modulation signal from the radio frequency modulation block ~~said radio frequency modulation block and switching block being contained in a single chassis in the form of one package.~~

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7. (currently amended) The channel module apparatus as set forth in claim 6, wherein said switching block further includes:

~~said radio frequency input connector provided for connection to a cable;~~

~~a first signal distributor for distributing the signal received via said radio frequency input connector to two stages and transferring a signal transmitted from a cable modem tuner to said radio frequency input connector;~~

~~said first cable connector adapted for transmitting one signal distributed by said first signal distributor to said cable modem tuner and an output signal from said cable modem tuner to said first signal distributor, respectively;~~

~~a high pass filter for blocking the signal transmitted from the cable modem tuner and passing high-frequency components of the second signal to the second signal distributor low-frequency components of the other signal distributed by said first signal distributor and passing high frequency components thereof;~~

~~a second signal distributor for distributing an output signal from said high pass filter to two stages;~~

~~said tuner connection terminal adapted for transferring one signal distributed by said second signal distributor to an internal tuner block;~~

~~a mixer for mixing the other signal distributed by said second signal distributor with an output signal from said radio frequency modulation block;~~

~~and said radio frequency output connector adapted for transmitting an output signal from said mixer to a television.~~

8. (currently amended) The channel module apparatus as set forth in claim 7, wherein said switching block further includes:

a first amplifier enabled in response to a booster voltage for amplifying an output signal from said high pass filter and transferring the amplified signal to said second signal

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distributor; and

a second amplifier enabled in response to said booster voltage for amplifying the [[other]] third signal distributed by said second signal distributor and transferring the amplified signal to said mixer.

9. (new) The channel module apparatus as set forth in claim 6, wherein said radio frequency modulation block and said switching block are contained in a single chassis in the form of one package.

10. (new) The channel module apparatus as set forth in claim 9, wherein said switching block further includes:

a high pass filter for blocking the signal transmitted from the cable modem tuner and passing high-frequency components of the second signal to the second signal distributor.

11. (new) The channel module apparatus as set forth in claim 10, wherein said switching block further includes:

a first amplifier enabled in response to a booster voltage for amplifying an output signal from said high pass filter and transferring the amplified signal to said second signal distributor; and

a second amplifier enabled in response to said booster voltage for amplifying the third signal distributed by said second signal distributor and transferring the amplified signal to said mixer.

12. (new) The channel module apparatus as set forth in claim 2, wherein said switching block further includes:

a high pass filter for blocking the signal transmitted from the cable modem tuner and passing high-frequency components of the second signal to the second signal distributor.

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13. (new) The channel module apparatus as set forth in claim 12, wherein said switching block further includes:

a first amplifier enabled in response to a booster voltage for amplifying an output signal from said high pass filter and transferring the amplified signal to said second signal distributor; and

a second amplifier enabled in response to said booster voltage for amplifying the third signal distributed by said second signal distributor.

14. (new) A channel module apparatus for a cable set-top box, said channel module apparatus comprising

a radio frequency input connector connectable to an external cable;

a cable connector connectable to an external cable modem tuner;

a tuner connection terminal connectable to a tuner of the cable set-top box;

a radio frequency output connector connectable to a television;

a switching block having a first signal distributor and a second signal distributor, wherein

the first signal distributor has an input connected to the radio frequency input connector, a first output connected to the cable connector and a second output,

said first signal distributor is configured to distribute a signal received via the radio frequency input connector as a first signal and as a second signal at the first and second outputs, respectively,

said first signal distributor is further configured to transfer a signal transmitted, by the cable modem tuner, from the cable connector to the radio frequency input connector,

the second signal distributor has an input connected to the second output of said first signal distributor, a third output, and a fourth output connected to the tuner connection terminal, and

the second signal distributor is configured to distribute the second signal as a third signal and as a fourth signal at the third and fourth outputs, respectively;

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a tuner block coupled to the fourth output of the second signal distributor for receiving and tuning to the fourth signal distributed by the second signal distributor;

a channel demodulation block coupled to the tuner block for receiving and demodulating an output signal from said tuner block into audio and video signals; and

a radio frequency modulation block coupled to said channel demodulation block for receiving and modulating the audio and video signals from said channel demodulation block into a television signal to be outputted to the television.

15. (new) The channel module apparatus as set forth in claim 14, wherein said switching block further comprises:

a high pass filter coupled between the second output of the first signal distributor and the input of the second signal distributor for blocking the signal transmitted from the cable modem turner via said first signal distributor, and passing high-frequency components of the second signal to the second signal distributor.

16. (new) The channel module apparatus as set forth in claim 15, wherein said switching block further comprises:

a first amplifier coupled between an output of said high pass filter and the input of said second signal distributor for amplifying an output signal from said high pass filter and transferring the amplified signal to said second signal distributor; and

a second amplifier coupled to the third output of said second signal distributor for amplifying the third signal distributed by said second signal distributor.

17. (new) The channel module apparatus as set forth in claim 16, wherein said switching block further comprises:

a mixer having a first input coupled to an output of said second amplifier for receiving the amplified third signal, a second input coupled to an output of said radio frequency modulation

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block for receiving the television signal, and an output coupled to the radio frequency output connector;

wherein said mixer is configured to mix the amplified third signal with the television signal and output the mixed signal to the television via the radio frequency output connector.

18. (new) The channel module apparatus as set forth in claim 17, further comprising a housing in which said switching block, radio frequency modulation block, tuner block and channel demodulation block are accommodated, and on which said radio frequency input connector, cable connector, tuner connection terminal, and radio frequency output connector are arranged.

19. (new) The channel module apparatus as set forth in claim 18, further comprising an input/output pin connector (IOPC).

20. (new) The channel module apparatus as set forth in claim 19, wherein said housing has a shape of a box;

said radio frequency input connector and radio frequency output connector being arranged on a first side of the box;

said cable connector being arranged on a second side of the box, said second side being adjacent to the first side; and

said IOPC being arranged on a third side of the box, said third side being adjacent to both said first side and second side.